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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/730,195

12/05/2000

Eric J. Helmsen

FORE-76

7958

7590

07/07/2005

Ansel M. Schwartz
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Pittsburgh, PA 15213

EXAMINER

MEEK, JACOB M

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/730,195

Applicant(s)

HELMSEN ET AL.

Examiner

Jacob Meek

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 13, 16 - 23, 25 - 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 is/are allowed.
- 6) ☒ Claim(s) 1-4, 16, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 5 - 13, 17 - 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 12, filed April 20, 2005, with respect to 112, 2nd paragraph rejection of claims 1, 16, and 27 have been fully considered and are persuasive. The 112, 2nd paragraph rejection of claims 1, 16, and 27 has been withdrawn.
2. Applicant's arguments filed April 20, 2005 with respect to rejection of claims 1 – 4, 16, 25, and 26 have been fully considered but they are not persuasive.

With regard to applicant's argument regarding jitter and wander with respect to reference. Examiner would like to point out that jitter is defined as the random variation in the timing of a signal, especially a clock. Examiner would also like to point out that that wander (or drift) is defined as long-term variations of the significant instants of a digital signal from their ideal positions in time. To further refine this, jitter is understood to be instantaneous variations happening at higher frequencies and wander is instantaneous variations occurring at lower frequencies. As presently claimed, any cascaded low pass filter arrangement that has a higher bandwidth in its 1st filter than in its 2nd filter could be broadly interpreted as meeting this limitation.

With regard to applicant's argument regarding the reading in of jitter and wander into references. Examiner would like to point out the SONET network requirements were put forth in the mid to late 1980's (see PTO-892), and were explicit in their requirements with regard to meeting jitter and wander requirements. SONET Network equipment designed for the US market would be required to meet jitter and wander requirements in order to be certified for deployment. Jitter and wander filtering would therefore be an inherent feature in SONET

network equipment, and cannot be considered hindsight in view of clearly documented requirements.

3. Previously cited rejections.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1 - 4, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutardja (US Patent 6,732,286) in view of Powell (US Patent 5,754,607).

With regard to claim 1, Sutardja teaches an apparatus a timing distribution apparatus comprising a source for producing a signal (see Figure 2, 280 and column 2, lines 13 – 18)), a first filter (see Figure 2, 205 and column 6, lines 13 – 36 where frequency integrator is interpreted as providing jitter filtering), a second filter (see Figure 2, 210 and column 6, lines 37 – 52 where this is interpreted as providing wander filtering). Sutardja is silent with respect to jitter and wander but incorporates Powell by reference. Powell discloses an apparatus for use in a SONET network element which addresses jitter and wander requirements (see column 1, lines 31 – 44, where reference 32 of figure 3 provides equivalent functionality as wander filter). It would have been obvious to one of ordinary skill in the art at the time of invention to adapt Sutardja's invention to incorporate Powell's invention to produce a timing apparatus with rapid acquisition and stable operating characteristics.

With regard to claim 2, Sutardja teaches an apparatus with a first filter including a tunable digital synthesizer for producing a clock source (see Figure 2, 280 and column 6, lines 53 – 60).

With regard to claim 3, Sutardja teaches his invention is digitally based (see column 2, lines 1 – 18) and utilizes shift registers and digital synthesizers, which are known to be clocked elements. Therefore, it would have been obvious to one of ordinary skill of art at the time of invention to provide oscillator for the clocking of the digital circuitry, as this is an inherent requirement for operation.

With regard to claim 4, Sutardja teaches his apparatus provides a reference clock input for comparison to the clock signal (see figure 2, S_T and column 6, lines 18 – 21).

With regard to claim 16, the steps claimed as method are nothing more than a restatement of the function of specific components of the apparatus as claimed above and therefore would have been obvious considering the aforementioned rejection of claim 1.

5. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bedrosian (US Patent 5,740,211) in view of Sutardja ('286) in further view of Powell ('607).

With regard to claim 25, Bedrosian teaches a master hardware system (see figure 1, 110, 120, 140 and column 3, lines 7 – 25) and a backup hardware system (see figure 1, 111, 121, 141 and column 3, lines 7 – 25) that allows master hardware system to fail without any phase discontinuity (see column 3 lines 57 – 67) each hardware system compromising the master hardware system (see Figure 1, 110, 120, 130, and 140) having first and second signals that are sent to a backup unit (see Figure 9A, Monitor Blocks where inputs are interpreted as 1st and 2nd master signals) that informs backup hardware system that master hardware system is either a failed or non-failed condition (see column 1, line 64 – column 2, line 4), the master system producing a timing distribution signal sent to backup hardware system and used as reference (see figure 1, 120, 121, 140, 141 and column 4, lines 37 – 44 where this is interpreted as equivalent) where backup hardware does not transmit timing distribution (see column 37 – 44 where this input selection is interpreted as equivalent functionality) and where backup system becomes master in event of failure and provides timing without discontinuity (see column 4, lines 1 – 23). Bedrosian is silent with respect to a 1st and 2nd filter for jitter and wander but discloses his device is used in ATM networks which are known to be SONET based. Sutardja ('286) in view of Powell ('607) teach a clock circuit with a 1st and 2nd filter. It would have been obvious to one of ordinary skill in the art at the time of invention to combine Sutardja / Powell with Bedrosian's invention to provide a clock with superior performance (see Sutardja, column 1, lines 65 – 67).

With regard to claim 26, the functions claimed as apparatus are nothing more than a restatement of the function of steps of the method as claimed above and therefore would have been obvious considering the aforementioned rejection of claim 25.

Allowable Subject Matter

6. Claims 5 – 13, 17 – 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claim 27 is allowed.

Other Cited Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. NPL reference is furnished to expound on jitter and wander requirements for network equipment.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM



JAY K. PATEL
SUPERVISORY PATENT EXAMINER